Exploring children's difficulties with language and literacy
Reading for meaning

Narr:
Paula Clarke of the University of York was instrumental in the design of an intervention programme called Reading for Meaning.

Paula:
The York Reading for Meaning project was set up to explore different approaches to supporting poor comprehenders in school, and using theory as a guide what we wanted to do is to really develop some interventions that would tailor to their specific profiles and needs. So we wanted to look at three different approaches, the first of which was focusing on text so, as we know, they have difficulties understanding text, so would an intervention that focuses primarily on understanding the written word in the written context, looking at inferencing, looking at understanding and the relationships between words and reasoning, would that have the best effects for these children in terms of their performance on a standardised test later on? Now we wanted to compare that with the oral language approach so we know from the research that these children have oral language weaknesses, so we wanted to see firstly could you improve oral language in these children using sort of vocabulary training, figurative language training, speaking and listening, and if you could improve oral language in these children would that then have significant and knock-on effect to their text comprehension skills? So we wanted to see if working in the spoken domain could then have that link to the written domain. And then to bring all of this together we then wanted to compare these two approaches to a third approach where we linked the spoken and the written domain together so we would have elements from the text comprehension program and the oral language program working together making links between the strategies that you can use in spoken language and those that you can use in written language, and to see whether actually the combination of these things was what was key and would have the most benefit for the children. So they were our three approaches that we set about investigating, and to do that we developed programs with manuals and resources, and games, and a training package for teaching assistants in school who were then going on to deliver it for us.

The overall design of the project is a randomised controlled trial and this is seen as a gold standard in education research, and within that we also have a waiting control group. To begin with we contacted schools in our local area, large schools who have been involved in research in the past or have expressed an interest in becoming involved, and what we did was we went into the classrooms when the children were in Year 4 and did some screening. And so to screen the children we used a measure of listening comprehension and a measure of spelling, so listening comprehension would give us a proxy for their reading comprehension, and spelling would give us a proxy for their decoding skill. And from that screening which was with over a thousand children across twenty schools we then narrowed down the group to around two hundred children who we then followed up an individual assessment. An individual assessment we then gave measures of reading and so this is where we were really able to identify the children who had the gap between their reading efficiency and decoding and their reading comprehension. So what we did then is selected the eight children within each of those twenty schools who showed the largest discrepancies between their reading efficiency and their reading comprehension and indeed, as a whole group, when we looked across all eight children across the twenty schools what we saw was an average discrepancy of around 15 standard score points, which is quite a substantial difference between the decoding and the comprehension. So starting from there within each school the eight children were selected, and at that point the randomisation took place, so two children were randomly allocated to the oral language program, two to the text comprehension program, two to the combined program, and two to the waiting control group, and the waiting control group were children who were selected in exactly the same way but were to receive no additional support in the early stage of the project, and we needed them in

the study so we could compare the relative benefits of the intervention to what was happening normally in a classroom situation, so they were our baseline control. These children then later went on to receive intervention but at a later stage so they didn't miss out, but it was just later on in the project. And then from them we did lots more pre-test assessment where we were able to look more widely at language skills in more depth, look at things such as memory and vocabulary skills, and such like, and then the intervention took place for twenty weeks.

There are probably two key messages I think from the results that we have so far, and what we did is we followed the children up at two time points after their intervention. First of all we saw them immediately after they'd had intervention, and then we also went back to see them eleven months later to see what the effects were sort of longer term. Now at immediate post testing what we saw was that all three of the intervention groups made significant improvements on one of our primary outcomes of reading comprehension relative to the controls, so in essence all three programs had shown real benefit for these children. What was also interesting to see was that for the children who'd received oral language support they had also shown significant improvements in their wide oral language and expressive vocabulary, so it did indeed seem to be the case that we could improve oral language in these children, but we could also improve their reading comprehension. Then when we went back to see them eleven months on, quite encouragingly, we also see significant effects for all three intervention groups eleven months on, so it's still best that the gains they made immediately have maintained, and indeed for the oral language group it looks like oral language maybe an important mediating factor in response to intervention, and indeed that's something that we are exploring at the moment with the data and looking at the possibilities. But the take home message is yes, these things can be improved, with a twenty week intervention that's relatively intensive and delivered by trained teaching assistants.

Narr:
But might the positive results be a result of increased 1:1 attention, rather than the intervention program itself?

Paula:
Within our study design we included a control task, so alongside our measures of reading comprehension, listening comprehension, expressive language, etcetera, we also had a task that we felt would not be directly related to what was being taught in the program, this was an arithmetic task. Now to answer the sceptics who might say that actually what's happened in these programs is that children have one-to-one attention and therefore some general factor, general motivation to learn has improved, what you would expect is that general motivation and learning to be applied across all different types of tasks, so in our control task you would also expect improvement if that were indeed the case. What we've found is when we look at the control task there are no significant improvements, either at immediate post test or long term, to suggest that these children are applying a general confidence or motivation to learn to an arithmetic task as well. So it suggests there's a specific effect on reading comprehension and language that isn't necessarily something to do with a more general factor across different topics.